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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/706,024

11/12/2003

Wilton W. Webster JR.

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10/13/2006

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EXAMINER

CAZAN, LIVIUS RADU

ART UNIT

PAPER NUMBER

3729

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/706,024	WEBSTER ET AL.	
	Examiner	Art Unit	
	Livius R. Cazan	3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed on 9/11/2006 has been fully considered and made of record. The objections to the specification and the rejection under 35 U.S.C. 112 have been overcome.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 2, and 5-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Griffin (US6144870). Davies et al. ("The Rate Dependence of Confor Polyurethane Foams") is used as extrinsic evidence.

Griffin discloses a catheter tip comprising a tubular shaft with at least one lumen extending therethrough and a hole extending from the outer surface of the shaft to a corresponding lumen, such that an electrode lead wire is passed through a lumen and out through a hole, wherein the a portion of the electrode lead wire that extends out of the hole is wrapped around the shaft at least one full turn (see abstract; see Figs. 2-6). A ring electrode is slid along the shaft to a position directly over the wrapped wire, and thereafter it is compressed diametrically at one end so as to be fixed in place on the shaft, having a flared skirt shape (see col. 5, Ins. 1-6). The electrode is then swaged to reduce its diameter so as to secure it to the catheter tip and make contact with the lead, such that the inner diameter of the ring electrode is about the same as the outer diameter of the shaft and the outer surface of the lead wire is generally flush with the outer surface of the shaft (see col. 5, Ins. 6-15). The electrode lead wire is

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stripped of insulation at the portions extending out of the hole (col. 4, Ins. 30-40). The shaft is made of polyurethane (col. 3, Ins. 20-30) and may be heated to so as to soften the material of the shaft (col. 4, Ins. 40-45). Note that although Griffin does not actually disclose the temperature at which the heating takes place, inherently a heating temperature must be applied which results in softening for the particular polyurethane used. Davies et al. disclose a polyurethane with a softening temperature of 90°C (underlined portion, page 118), so if such a polyurethane is used, clearly, it should be heated to about 90°C. Also note that the angle of flaring seen in Fig. 6 appears to be between about 4 degrees and about 8 degrees, and in particular about 6 degrees.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin as applied to claim 1 above.
 - a. Regarding claims 3 and 4, Griffin does not disclose wrapping the lead wire around the shaft at least two times nor using a clove hitch arrangement to secure the lead wire to the shaft.

At the time the invention was made, it would have been obvious matter of engineering design choice to a person of ordinary skill in the art to wrap the lead wire around the shaft more than once and to use a clove hitch arrangement because the Applicant admits that the particular arrangement is not essential, as long as the electrode lead wire is secured

to the surface of the shaft (page 2, Ins. 25-35). Therefore, any wire arrangement that results in a secure connection will be adequate.

Therefore it would have been prima facie obvious to modify the invention of Griffin to obtain the invention as specified in claims 3 and 4 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Griffin.

b. Regarding claims 5 and 6, to the extent the applicant disagrees with the assertion that the flaring angle is between about 4 degrees and about 8 degrees, Griffin does not specifically discuss the flaring angle.

However, at the time the invention was made, it would have been obvious matter of engineering design choice to a person of ordinary skill in the art to form a flaring angle of between about 4 and about 8 degrees, in particular about 6 degrees, because, as discussed above (claim 1) and as seen in Fig. 5, the flared skirt is formed by pressing one end of the ring electrode so as to secure it to the shaft. As one of skill in the art would appreciate, since one end of the electrode is secured to the shaft, it does not matter what the flaring angle is, and it may easily be within the range specified by the Applicant.

Therefore it would have been prima facie obvious to modify Griffin to obtain the invention as specified in claims 5 and 6 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Griffin.

Response to Arguments

6. Applicant's arguments filed 9/11/2006 regarding the use of the term "about" (see page 8, first paragraph) are persuasive, and the corresponding rejection has therefore been withdrawn.

7. Applicant's arguments filed 9/11/206 regarding claims 1-9 have been fully considered but they are not persuasive. Applicant argues that Griffin does not disclose a flared skirt nor an angle of about 4 to about 8 degrees (see page 8, second and third paragraphs).

As currently claimed, the invention requires sliding a ring electrode having a proximal portion which forms a flared skirt over the shaft of the catheter tip section. The claim language does not specify that the ring electrode must have this flared portion to begin with, but merely specifies that the proximal portion must form, at some point in time, a flared skirt over the shaft of the catheter tip section. Therefore Griffin *does* indeed disclose this limitation, since, the ring electrode is deformed so as to form a flared skirt portion over the shaft of the catheter tip portion, as seen in Figs. 5 and 6 of Griffin, the skirt portion being deformed at an angle.

Moreover, Applicant's attention is directed to US2286097 to Johnson, which shows forming a flared skirt (7, Fig. 2) on a cylindrical metal terminal to be attached to a conductor, wherein the flared skirt allows the terminal to be easily slid over the end of the conductor (see col. 2, lns. 1-5). Although Griffin discloses a flared skirt, as discussed above, even if this were not the case (i.e. if Griffin would not disclose the flared skirt), it still would have been obvious to one of

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ordinary skill in the art at the time the invention was made to provide the ring electrode of Griffin with such a flared portion, in view of the teachings of Johnson, in order to easily slide the electrode over the end of the catheter shaft.

Further, since, as seen from the Johnson reference, it is known to employ a proximal portion having a skirt flared at some angle, it would have been obvious to one of ordinary skill in the art at the time the invention was made to obtain the optimum flaring angle, in order to most easily slide the electrode over the end of the catheter shaft. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 223.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

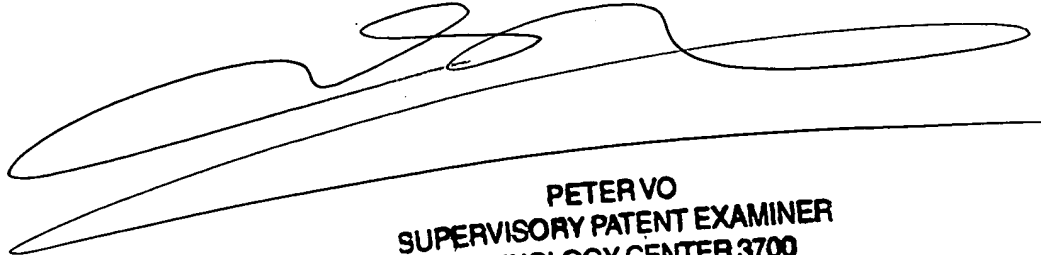
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Livius R. Cazan whose telephone number is (571) 272-8032. The examiner can normally be reached on 7:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571)272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LRC 10/05/2006



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